

In the Claims:

Please cancel claims 35-36. Please amend claims 2-3, 9, 12, and 34. The claims are as follows:

1. (CANCELED)

2. (CURRENTLY AMENDED) An electronic structure, comprising:

a substrate;

a first circuit line including a first portion and a second portion, wherein the second portion of the first circuit line consists of a first conductive pad, wherein the first portion of the first circuit line has a first thickness extending in a first direction perpendicular to a surface of the substrate, wherein the first circuit line is in direct surface-to-surface contact with the surface of the substrate, and wherein the first circuit line is totally external to an interior of the substrate, wherein a width in a second direction of the second portion of the first substrate exceeds a width in the second direction of the first portion of the first substrate, wherein the second direction is oriented parallel to the surface of the substrate; and

a second circuit line including a first portion and a second portion, wherein the second portion of the second circuit line consists of a second conductive pad, wherein the first portion of the second circuit line has a second thickness extending in the first direction perpendicular to the surface of the substrate, wherein the second circuit line is in direct surface-to-surface contact with the surface of the substrate, wherein the second circuit line is electrically coupled to the first circuit line, wherein the second thickness is unequal to the first thickness, wherein the second

09/526,957

2

circuit line is totally external to the interior of the substrate, and wherein the first circuit line physically touches the second circuit line in direct surface-to-surface contact, and wherein a width in the second direction of the second portion of the second substrate exceeds a width in the second direction of the first portion of the second substrate;

an electronic assembly coupled to the first conductive pad; and

an electronic carrier coupled to the second conductive pad.

3. (CURRENTLY AMENDED) An electronic structure, comprising:

a substrate;

a first circuit line including a first portion and a second portion, wherein the second portion of the first circuit consists of a first conductive pad, wherein the first portion of the first circuit line has a first thickness extending in a direction perpendicular to a surface of the substrate at which the first circuit line is coupled to the substrate, and wherein the first circuit line is totally external to an interior of the substrate and is in direct surface-to-surface contact with the substrate;

a second circuit line including a first portion and a second portion, wherein the second portion of the second circuit line consists of a second conductive pad, wherein the first portion of the second circuit line has a second thickness extending in ~~[[a]]~~ the direction perpendicular to ~~[[a]]~~ the surface of the substrate at which the second circuit line is coupled to the substrate, wherein the second circuit line is electrically coupled to the first circuit line, wherein the second thickness is unequal to the first thickness, and wherein the second circuit line is totally external to the interior of the substrate and is in direct surface-to-surface contact with the substrate; and

a third circuit line coupled to the substrate, wherein the third circuit line has a third thickness that is unequal to both the first thickness and the second thickness, wherein a portion of the third circuit line is electrically coupled to a portion of the first circuit line, wherein a portion of the third circuit line is electrically coupled to a portion of the second circuit line, wherein the third thickness extends in ~~[[a]]~~ the direction perpendicular to ~~[[a]]~~ the surface of the substrate at which the third circuit line is coupled to the substrate, and wherein the third circuit line is totally external to the interior of the substrate and is in direct surface-to-surface contact with the substrate, wherein the third circuit line physically touches the first circuit line in direct surface-to-surface contact, and wherein the third circuit line physically touches the second circuit line in direct surface-to-surface contact;

an electronic assembly coupled to the first conductive pad; and

an electronic carrier coupled to the second conductive pad.

4. (PREVIOUSLY PRESENTED) The electronic structure of claim 2, wherein an end of the first circuit line includes the first conductive pad, and wherein an end of the second circuit line includes the second conductive pad.

5. (PREVIOUSLY PRESENTED) The electronic structure of claim 2, further comprising a protective coating that covers a portion of a circuit line, wherein the circuit line includes the first circuit line and the second circuit line.

6. (CANCELED)

7. (WITHDRAWN) An electronic structure, comprising:

a substrate;

a first circuit line including a first portion and a second portion, wherein the second portion of the first circuit line consists of a first conductive pad, wherein the first portion of the first circuit line has a first thickness extending in a direction perpendicular to a first surface of the substrate, wherein the first circuit line is in direct surface-to-surface contact with the first surface of the substrate, and wherein the first circuit line is totally external to an interior of the substrate; and

a second circuit line including a first portion and a second portion, wherein the second portion of the second circuit line consists of a second conductive pad, wherein the first portion of the second circuit line has a second thickness extending in the direction perpendicular to a second surface of the substrate, wherein the second circuit line is in direct surface-to-surface contact with the second surface of the substrate, wherein the second circuit line is electrically coupled to the first circuit line, wherein the second thickness is unequal to the first thickness, wherein the second circuit line is totally external to the interior of the substrate, wherein said electrical coupling of the second circuit line to the first circuit line includes a plated through hole (PTH), wherein a portion of the first circuit line is coupled to a first end of the PTH, and wherein a portion of the second circuit line is coupled to a second end of the PTH, and wherein the PTH is uncovered at both the first end of the PTH and the second end of the PTH.

8. (CANCELED)

9. (CURRENTLY AMENDED) The electronic structure of claim 2, further comprising:

a first solder ball ~~coupled to~~ coupling the first conductive pad to the electronic assembly;
and

~~an electronic assembly coupled to the first solder ball;~~

a second solder ball ~~coupled to~~ coupling the second conductive pad to the electronic
carrier; and

~~an electronic carrier coupled to the second solder ball.~~

10. (ORIGINAL) The electronic structure of claim 9, wherein a diameter of the second solder ball is unequal to a diameter of the first solder ball.

11. (PREVIOUSLY PRESENTED) The electronic structure of claim 2, wherein the first conductive pad includes a metallic layer, and further comprising:

a first metallic coating over the metallic layer; and

a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

12. (CURRENTLY AMENDED) The electronic structure of claim 11, further comprising:

a wirebond interconnect coupled to the first conductive pad at the second metallic coating[[:]], wherein the an electronic assembly is coupled to the wirebond interconnect; and

a solder ball coupled to the second conductive pad; and wherein the an electronic carrier
is coupled to the solder ball.

13. (ORIGINAL) The electronic structure of claim 12, wherein the metallic layer includes copper, wherein the first metallic coating includes nickel, wherein the metal of the second metallic coating is selected from the group consisting of gold and palladium, and wherein the wirebond interconnect includes a gold wire.

Claims 14-27. (CANCELED)

28. (WITHDRAWN) The electronic structure of claim 7, further comprising:

- a first solder ball coupled to the first conductive pad;
- an electronic assembly coupled to the first solder ball;
- a second solder ball coupled to the second conductive pad; and
- an electronic carrier coupled to the second solder ball.

29. (WITHDRAWN) The electronic structure of claim 28, wherein a diameter of the second solder ball is unequal to a diameter of the first solder ball.

30. (WITHDRAWN) The electronic structure of claim 7, wherein the first conductive pad includes a metallic layer, and further comprising:

- a first metallic coating over the metallic layer; and

a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

31. (WITHDRAWN) The electronic structure of claim 30, further comprising:

a wirebond interconnect coupled to the first conductive pad at the second metallic coating;

an electronic assembly coupled to the wirebond interconnect;

a solder ball coupled to the second conductive pad; and

an electronic carrier coupled to the solder ball.

32. (WITHDRAWN) The electronic structure of claim 31, wherein the metallic layer includes copper, wherein the first metallic coating includes nickel, wherein the metal of the second metallic coating is selected from the group consisting of gold and palladium, and wherein the wirebond interconnect includes a gold wire.

33. (PREVIOUSLY PRESENTED) The electronic structure of claim 3, wherein the first conductive pad includes a metallic layer, and further comprising:

a first metallic coating over the metallic layer; and

a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

34. (CURRENTLY AMENDED) The electronic structure of claim 33, further comprising:

a wirebond interconnect ~~coupled to~~ coupling the first conductive pad at the second metallic coating to the electronic assembly; and
an ~~electronic assembly coupled to the wirebond interconnect;~~
a solder ball ~~coupled to~~ coupling the second conductive pad to the electronic carrier; and
an ~~electronic carrier coupled to the solder ball.~~

35. (CANCELED)

36. (CANCELED)

37. (PREVIOUSLY PRESENTED) The electronic structure of claim 9, wherein the electronic assembly comprises a chip, and wherein the electronic carrier comprises a circuit card.

38. (PREVIOUSLY PRESENTED) The electronic structure of claim 12, wherein the electronic assembly comprises a chip, and wherein the electronic carrier comprises a circuit card.

39. (WITHDRAWN) The electronic structure of claim 28, wherein the electronic assembly comprises a chip, and wherein the electronic carrier comprises a circuit card.

40. (WITHDRAWN) The electronic structure of claim 31, wherein the electronic assembly comprises a chip, and wherein the electronic carrier comprises a circuit card.

41. (PREVIOUSLY PRESENTED) The electronic structure of claim 34, wherein the electronic assembly comprises a chip, and wherein the electronic carrier comprises a circuit card.